

# Evaluating Sources of Job Satisfaction: A Survey of U.S. Fish and Wildlife Refuge Managers and Biologists

Information and Technology Report  
USGS/IRD/ISR-2003-2004

20040413 086

U.S. Department of the Interior  
U.S. Geological Survey

 **USGS**  
*science for a changing world*



To purchase this report, contact the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 (call toll free 1-800-553-6847), or the Defense Technical Information Center, 8725 Kingman Rd., Suite 0944, Fort Belvoir, VA 22060-6218.

# **Evaluating Sources of Job Satisfaction: A Survey of U.S. Fish and Wildlife Refuge Managers and Biologists**

Information and Technology Report  
USGS/BRD/ITR--2003-0004  
December 2003

**DISTRIBUTION STATEMENT A**  
Approved for Public Release  
Distribution Unlimited

---

By  
Phadrea D. Ponds  
Ayeisha A. Brinson  
Delwin Benson

U.S. Department of the Interior  
U.S. Geological Survey

**Best Available Copy**

*Suggested citation:*

Ponds, P.D., Brinson, A.A., and Benson, D., 2003, Evaluating sources of job satisfaction: A survey of U.S. Fish and Wildlife refuge managers and biologists: Information and Technology Report, USGS/BRD/ITR--2003--0004, 8 p.

## Contents

	Page
Introduction .....	1
Method and Variables .....	1
Selected Study Results .....	2
Perception as a Professional .....	2
Sources of Job Satisfaction .....	4
Sources of Job Dissatisfaction .....	5
Conclusions .....	5
Opportunity .....	5
Stress .....	5
Leadership .....	6
Work Standards .....	6
Fair Rewards .....	6
Adequate Authority .....	6
References Cited.....	6

# Evaluating Sources of Job Satisfaction: A Survey of U.S. Fish and Wildlife Refuge Managers and Biologists

By

Phadrea D. Ponds  
Ayeisha A. Brinson<sup>1</sup>

*U.S. Geological Survey  
Fort Collins Science Center  
2150 Centre Avenue, Bldg. C  
Fort Collins, CO 80526-8118*

and

Delwin Benson

*Department of Fisheries and Wildlife Biology  
Colorado State University  
Fort Collins, CO 80523*

## Introduction

The following summary consists of revised excerpts from the thesis study that was conducted in 2000–2002 by Ayeisha Brinson, Colorado State University (Brinson, 2002, 2002a). The purpose of this report is to provide the U.S. Fish and Wildlife Service (USFWS) with additional findings related to sources of job satisfaction. Because this is a report of additional findings from a lengthy study, the information in this report is condensed and presented without references from the original research. The literature review, methodology, and discussion from the original thesis are not presented in this report. Any questions concerning the thesis should be directed to Ayeisha Brinson, who may be reached by e-mail ([abrinson@rsmas.miami.edu](mailto:abrinson@rsmas.miami.edu)).

The purpose of the report is to examine differences and similarities between National Wildlife Refuge managers and biologists on a selection of independent variables related to job satisfaction occupational status (being either a manager or a biologist): are managers more

satisfied with their jobs than biologist? If so, what are the components of that satisfaction? What are the sources of dissatisfaction?

To further assess the attitudes and perceptions of refuge biologists and managers we attempted to answer the following questions:

- What are the differences and similarities between refuge biologists and managers on their perceptions as professionals?
- What are the differences and similarities between refuge biologists and managers on their level of job satisfaction?
- What are the differences and similarities between refuge biologists and managers on their level of job dissatisfaction?

## Method and Variables

The original study employed a self-administered survey with open- and closed-ended questions to gather the data. The participants for this study were drawn from the 240 physically staffed USFWS refuges in the continental United States (staff duplications and unstaffed refuges were removed from the survey sample). A manager and refuge biologist were identified at each

---

<sup>1</sup>Current address: P.O. Box 612514, North Miami, FL 33261-2514.

refuge (n = 480). A total of 314 (65.4%) respondents (174 biologists, 133 managers, and 8 others) returned the survey. A modified Dillman (2000) technique was used to administer the survey; and finally the data were analyzed using SPSS 11.0.

### *Selected Study Results*

The results show that of the 314 respondents who answered the survey, 75% were male, 23% female, and 2% did not respond to the question. The average age of the respondents was 44.5.

Forty-seven percent of the respondents had a BA or a BS degree in biological sciences. Another 47% had graduate degrees (MS or MA) in either biological or ecological sciences and the remaining 6% reported having a Ph.D. in ecological sciences or related studies. The majority of the respondents were self-reported as either a GS 11 or 12 (56%). In order to understand the dynamics of people's sources of job satisfaction it is important to understand the factors that make people different. One factor that we used, as a general measure to test these differences, was political ideology. When asked about their political orientation, respondents reported being more liberal than conservative: 40% reported having more liberal political orientation than slightly conservative or conservative orientations, 22% reported moderate orientation, and 32% reported having slightly conservative or conservative political orientations. A description of all respondents is displayed in Fig. 1 (also see the Appendix).

Correlations were run to determine whether age, gender, ideology, number of years in service, grade level, and educational level were significantly related to occupational status. As seen in Table 1, gender and educational level were both positively related to occupational

status. Additional significant socio-demographic summary statistics included age, ideology, number of years in service, and grade level. These findings are consistent with the view that gender and educational levels are key factors in determining occupational status (McCormick, 2000). Other socio-demographic data were not significantly related to occupational status.

We also performed an analysis of the correlations between refuge managers and biologists and with several subscales (sources of job satisfaction and dissatisfaction, and perception as a professional). Of interest between the biologist and managers was the fact that the perception as a professional had a weak but significant correlation with our measures concerning job satisfaction (Table 2).

### *Perception as a Professional*

When managers and biologists were asked to indicate how they would like others to perceive them as a professional, the most frequent response overall (n = 103; 33%; Table 3) was that they wanted to be perceived as a good land steward and wildlife biologist. When viewed independently, biologists also preferred to be perceived as good land stewards (n = 68; 40%). However, among the managers, being perceived as a good scientist (n = 38; 29%) and wildlife manager (n = 40; 30%) were considered to be the most important professional qualities. Interestingly, being considered as a good scientist earned zero responses from the biologists. The biologists rated being a good program administrator (n = 20; 12%) and good people manager (n = 9; 5%) higher than being a good scientist.

Although differences existed between biologists and managers, in most cases those differences were not significant. However, 71% of biologist reported a higher

**Table 1.** Correlation coefficients describing the significant relationships between occupational status and selected socio-demographic variables.

Variables	Refuge manager/biologist	
	Pearson correlation	Sig. (2-tailed)
Gender	.242	.000
Age	-.114	.047
Ideology	-.108	.060
Number of years	-.081	.157
Grade level	-.042	.463
Level of education	.271	.000

<sup>a</sup>Correlation is significant at the 0.05 level (2-tailed).

**Table 2.** Correlation coefficients describing the significant relationships between occupational status and selected variables.

Variables	Refuge manager/biologist	
	Pearson correlation	Sig. (2-tailed)
Sources of job satisfaction	-.032	.576
Sources of job dissatisfaction	.028	.627
Perception as a professional	-.331	.000

<sup>a</sup>Correlation is significant at the 0.05 level (2-tailed).

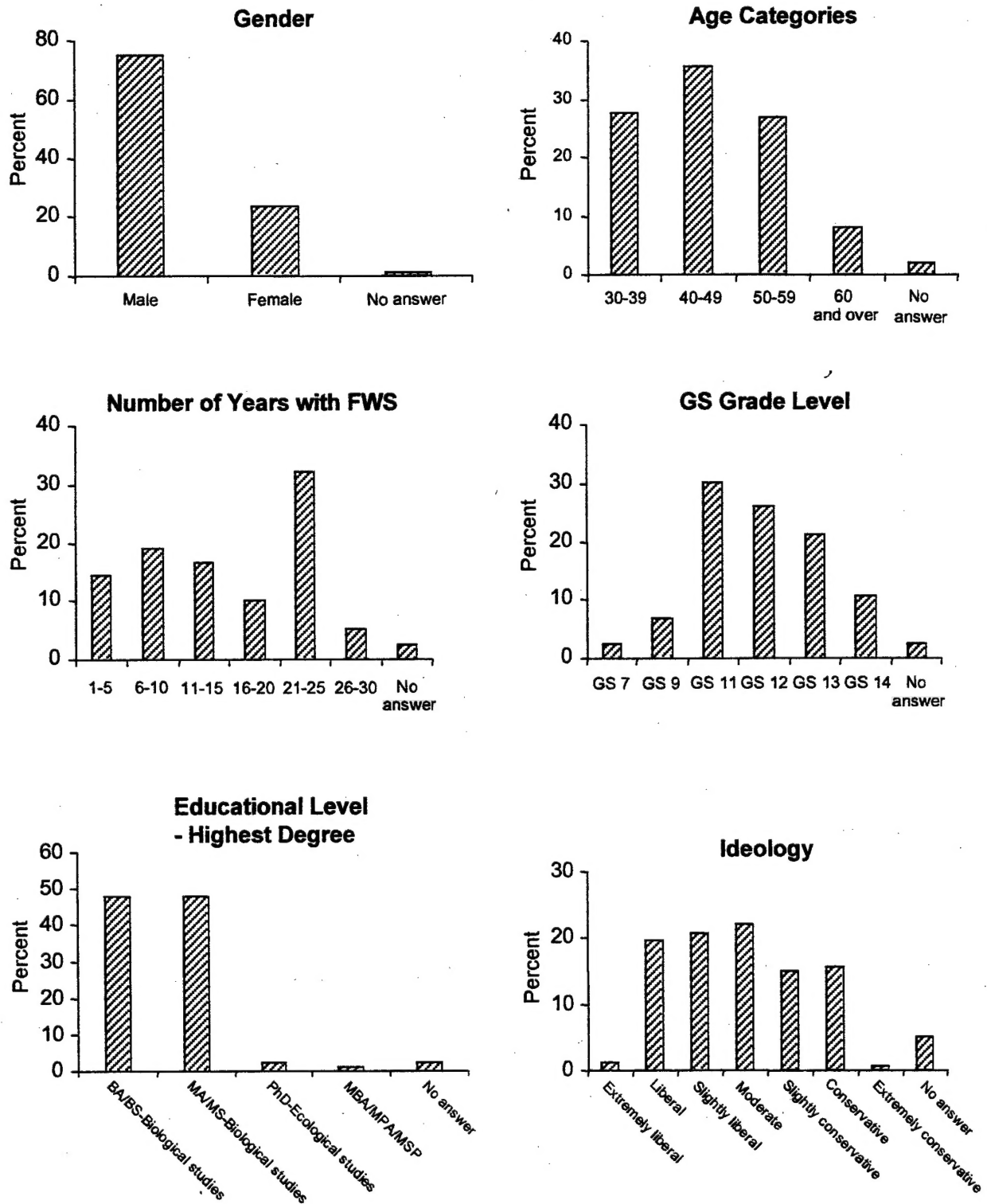


Fig. 1. Overall statistics of all respondents (n = 314).



**Table 3.** Comparison of perceptions as a professional by selected socio-demographic characteristics.

Perception as a professional	Refuge manager/biologist <sup>a</sup>		Gender		Educational level		
	Biologist or	Manager or	Male	Female	BA/BS	MA/MA	Ph.D.
	Acting biologist	Acting manager					
Good scientist	0	38	25	14	11	23	5
Good wildlife manager	55	40	78	21	49	49	0
Good people manager	9	0	7	2	5	4	0
Good program administrator	20	1	17	4	17	4	0
Good land steward	68	35	8	22	52	47	2
Total	152	114	207	63	134	127	7

<sup>a</sup>X<sup>2</sup> statistic shows a significant difference between managers and biologists at  $P < .001$  ( $X^2 = 73.197$ ;  $P < .000$ )

interest in being perceived as a good wildlife manager and land steward compared to 56% of managers (Table 3).

#### *Sources of Job Satisfaction*

The original question regarding the greatest sources of job satisfaction was an open-ended question that asked the respondents a number of questions about their level of job satisfaction (satisfaction with work on the present job, supervision, co-workers, and satisfaction with the job in general). However, for the purposes of this report, responses were categorized and grouped. Overall, more than half of the respondents (61%) reported that accomplishing projects for wildlife/habitat protection (i.e.,

working outdoors, participating in interesting projects, and having a challenging job) was the most important source of their job satisfaction (Table 4). This was the highest priority for both men (63%) and women (57%) (Table 4). When comparing biologists and managers, there were no significant differences in sources of job satisfaction (Table 4). On average, biologists were slightly more likely than managers to report that land stewardship, teamwork, and working with other professionals all impacted their sources of job satisfaction. However, none of these had more than a slight impact. The findings in this section suggest that intrinsic or personal philosophies contributed greatly to the sense of job satisfaction.

**Table 4.** Sources of job satisfaction by refuge managers/biologists, gender, and educational level.

Sources of job satisfaction	Refuge manager/biologist <sup>a</sup>		Gender		Educational level		
	Biologist or	Manager or	Male	Female	BA/BS	MA/MA	Ph.D.
	Acting biologist	Acting manager					
Accomplishing projects for wildlife protection	107	78	148	42	89	98	2
Land stewardship/future generations	30	20	36	14	23	21	3
Dream job/enjoy this work/ personal satisfaction	8	19	16	11	16	9	2
Results for visitors/ visitor appreciation	6	7	10	2	7	6	0
Working with other groups/ professionals	7	3	9	1	4	6	0
Teamwork/leadership	14	4	14	4	10	8	0
Total	172	131	233	74	149	148	7

<sup>a</sup>X<sup>2</sup> statistic shows a significant difference between managers and biologists at  $P < .05$  ( $X^2 = 12.949$ ;  $P < .024$ ).

### Sources of Job Dissatisfaction

Respondents were asked to give an account of the things in their jobs that were considered the most important source of job dissatisfaction. Because this question was open-ended, the results were coded into five categories (Table 5): bureaucracy (politics, paperwork, and red tape; 43%); staff conflict (poor relationships with supervisor or other co-workers; 18%); resources (lack of funding and staff; 17%); ineffective leadership (lack of support from upper management; 13%); and public mistrust (public disapproval and anti-environmental rhetoric) (6%). Overall, the biologists (47%) felt that they were overburdened by paperwork and red tape to a far greater degree than did managers (38%; Table 5). It is interesting to note that male respondents ( $n = 107$ ; 45%) were more likely than female respondents ( $n = 25$ ; 34%) to report dissatisfaction by the red tape, bureaucracy and administrative paper work associated with their jobs. Personnel issues/staff conflicts and lack of staff/funds/time were collectively considered slightly higher sources of job dissatisfaction for female ( $n = 28$ ; 38%) respondents than for males ( $n = 52$ ; 22%) (Table 5).

### Conclusions

Several conclusions about the state of USFWS managers and biologists can be drawn from these findings. First, the demographic data show that the USFWS refuge employees are overwhelmingly male (75%), "maturing" ( $\geq 49$  years old, 63%), and have been employed with the USFWS 15 years or more (56%; see Appendix). Second, more than 75% of all of the respondents felt that managing for the protection of wildlife is the most important source of job satisfaction. This is a significant finding, because it speaks directly to the fact that

above and beyond dissatisfaction with the bureaucracy, red tape, and ineffective leadership, respondents are very committed to the job they set out to do—protect wildlife and natural resources for the next generation.

It is important to take a holistic look at the priorities and preferences that respondents indicated as sources of job satisfaction and dissatisfaction. When planning workforce performance measures and strategic plans this is the type of data that is conspicuously missing from most planning processes and discussions. It was not surprising to find that gender and educational levels were the factors associated with differences between biologists and managers.

Until recently, the assessment of the factors that influence job satisfaction, workforce performance, and employee well-being for federal employees has been delegated to the offices of Personnel, Human Resources and Employee Opportunities [formerly Equal Employment Opportunities (EEO)]. However, changing demographics, restructuring, and internal reorganizations are requiring that managers, supervisors, and leaders understand and respond to issues related to job satisfaction, workforce performance, and employee well being. Bavendam Research (2000) identified six factors that influence job satisfaction.

### Opportunity

Employees are more satisfied when they have challenging opportunities at work. This includes chances to participate in interesting projects, jobs with a satisfying degree of challenge, and opportunities for increased responsibility.

### Stress

When negative stress is continuously high, job satisfaction is low. Jobs are more stressful if they interfere

**Table 5.** Sources of job dissatisfaction by refuge managers/biologists, gender, and educational level.

Sources of job dissatisfaction	Refuge manager/biologist <sup>a</sup>		Gender		Educational level		
	Biologist or	Manager or			BA/BS	MA/MA	Ph.D.
	Acting biologist	Acting manager	Male	Female			
Bureaucracy and red tape	81	50	107	25	64	64	2
Conflict/politics	28	26	39	16	29	23	2
Lack of funding and staff	23	29	34	19	15	35	2
Ineffective leadership	26	14	32	9	23	18	0
Public mistrust	11	7	15	3	13	5	1
Total	169	126	227	72	144	145	7

<sup>a</sup>Correlation is significant at the 0.05 level (2-tailed).

with employees' personal lives or are a continuing source of worry or concern.

### *Leadership*

Employees are more satisfied when their managers are good leaders.

### *Work Standards*

Employees are more satisfied when their entire workgroup takes pride in the quality of its work.

### *Fair Rewards*

Employees are more satisfied when they feel they are rewarded fairly for the work they do.

### *Adequate Authority*

Employees are more satisfied when they have adequate freedom and authority to do their jobs.

These factors are similar to what we found in this study. Refuge managers and biologists reported that they are more satisfied with their jobs when they had chances to participate in interesting projects, jobs were challenging, and they were free from bureaucracy and red tape. Employees are also more satisfied when they believe effective leadership and teamwork to be present.

There is very little information about public sector professionals and their attitudes toward their work, managers, or employees. Weaver and Franz (1992) argued that the literature is varied and inconclusive. They stated that although the empirical studies concerning this subject are increasing, large gaps remain in the literature and there is almost no literature comparing the attitudes of employees in the public and private sectors. Therefore, we suggest another study should be done to undertake a much broader survey of job satisfaction and attitudes of managers and professionals in the USFWS. Another study conducted to evaluate other agencies in the Department of the Interior to compare level of job satisfaction might be fruitful for decision makers.

And finally, further analysis using age as a generational cohort to measure postmodern relationships might help understand changing demographic and expected trends. This study could serve as a baseline for that analysis. These additional summary findings suggest the importance of further discussion about the attitudes and perceptions of USFWS managers and biologists in the context of job satisfaction. This discussion could improve understanding of workplace performance, position management, and the roles and responsibilities of a new generation of federal employees. It could also help identify leadership skills needed to deal with these issues.

## References Cited

- Bavendam Research, 2000, Managing job satisfaction: Bavendam Research Inc.: Special Reports, vol. 6. (<http://www.employeesatisfactions.com>)
- Brinson, A.A., 2002, Attitudes, values, and perceptions of National Wildlife Refuge managers and biologists: M.S. thesis, Colorado State University, Fort Collins.
- Brinson, A.A., 2002a, Values and attitudes of National Wildlife Refuge managers and biologists, report to respondents: U.S. Geological Survey Open File Report 02-459, 19 p.
- Dillman, D., 2000, Mail and Internet surveys, The Tailored Design Method (2d ed.): New York, John Wiley and Sons.
- Kumar, K. G., and Achamamba, B., 1993, A comparative study of job satisfaction and job involvement among public and private sector employees: Psychological Studies, vol. 38, no. 2.
- McCormick, C., 2000, A study of the job attitudes (job satisfaction, organizational commitment, and career commitment) and career adaptability of the Members of the Library and Information Science Profession, Ph.D. dissertation: George Mason University, Fairfax, VA.
- Verona, F., 2002, Conceptualization of management and communication satisfaction and organizational commitment in three Guatemalan organizations: American Communication Journal, vol. 5, issue 3.
- Weaver, C.N., Franz, R.S., 1992, Work-related attitudes of entrepreneurs and public and private employees: Psychological Reports, vol. 70, p. 387-390.

Appendix. Frequency distributions and percentages of selected variables.

	Gender (n = 314)				Age (n = 308)	
	Male (n = 236; 75%)	Female (n = 74; 24%)	No answer (n = 4; 1%)	Less than 49 years old (n = 199; 63%)	Over 50 years old (n = 109; 35%)	
Refuge manager/biologist						
Biologist or Acting biologist	147	24	2	102	68	
Manager or Acting manager	87	46	0	94	38	
Other	2	4	2	3	3	

	Refuge manager/biologist (n = 314)				Age (n = 308)	
	Biologist or Acting biologist (n = 173; 55%)	Manager or Acting manager (n = 133; 42%)	Other (n = 8; 3%)	Gender (n = 314)	Less than 40 years old (n = 199; 63%)	Over 50 years old (n = 109; 35%)
				Male (n = 236; 75%)	Female (n = 74; 24%)	No answer (n = 4; 1%)
Educational level						
BA/BS - Biological Sciences	100	46	4	119	30	1
MA/MS - Biological Sciences	67	79	2	107	40	1
Ph.D. - Ecological Sciences	0	7	0	4	3	0
MBA/MPA/MSP	2	0	0	1	1	0
No answer	4	1	2	5	0	2

	Refuge manager/biologist (n = 314)				Age (n = 308)	
	Biologist or Acting biologist (n = 173; 55%)	Manager or Acting manager (n = 133; 42%)	Other (n = 8; 3%)	Gender (n = 314)	Less than 40 years old (n = 199; 63%)	Over 50 years old (n = 109; 35%)
				Male (n = 236; 75%)	Female (n = 74; 24%)	No answer (n = 4; 1%)
Number of years with FWS						
1-5	6	37	2	22	23	0
6-10	25	33	2	39	21	0
11-15	25	26	1	38	14	0
16-20	20	11	1	27	5	0
21-25	79	22	0	90	11	0
26-30	14	2	0	16	0	0
No answer	4	2	2	4	0	4

## Appendix. Concluded.

Grade level	Refuge manager/biologist (n = 314)				Gender (n = 314)		Age (n = 308)	
	Biologist or Acting biologist (n = 173; 55%)	Manager or Acting manager (n = 133; 42%)	Other (n = 8; 3%)		Male (n = 236; 75%)	Female (n = 74; 24%)	Less than 40 years old (n = 199; 63%)	Over 50 years old (n = 109; 35%)
GS-7	0	7	1		4	4	3	4
GS-9	3	18	0		11	10	14	7
GS-11	17	74	4		70	25	73	22
GS-12	52	30	0		61	21	55	26
GS-13	65	1	1		56	11	41	26
GS-14	33	0	0		31	2	12	21
No answer	3	3	2		3	1	1	3

Ideology	Refuge manager/biologist (n = 314)				Gender (n = 314)		Age (n = 308)	
	Biologist or Acting biologist (n = 173; 55%)	Manager or Acting manager (n = 133; 42%)	Other (n = 8; 3%)		Male (n = 236; 75%)	Female (n = 74; 24%)	Less than 40 years old (n = 199; 63%)	Over 50 years old (n = 109; 35%)
Liberal	63	65	3		76	55	95	35
Moderate	36	31	2		59	10	42	27
Conservative	63	34	1		91	7	54	43
No answer	11	3	2		10	2	9	4

REPORT DOCUMENTATION PAGE			Form approved OMB No. 0704-0188	
<p>Public reporting burden for this collection is estimated to average 1 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington, DC 20503.</p>				
1. AGENCY USE ONLY (Leave Blank)	2. REPORT DATE December 2003	3. REPORT TYPE AND DATES COVERED Information and Technology Report (Final)		
4. TITLE AND SUBTITLE Evaluating sources of job satisfaction: A survey of U.S. Fish and Wildlife Refuge managers and biologists		5. FUNDING NUMBERS PPPF8		
6. AUTHOR(S) Ponds, P.D., Brinson, A.A., and Benson, D.				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESSES U.S. Department of the Interior U.S. Geological Survey Biological Resources Division		8. PERFORMING ORGANIZATION REPORT NUMBER USGS/BRD/ITR-- 2003-0004		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESSES USGS - Fort Collins Science Center 2150 Centre Avenue, Bldg. C Fort Collins, CO 80526-8118		10. SPONSORING, MONITORING AGENCY REPORT NUMBER N/A		
11. SUPPLEMENTARY NOTES Prepared in cooperation with U.S. Fish and Wildlife Service and Colorado State University				
12a. DISTRIBUTION/AVAILABILITY STATEMENT Available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 (1-800-553-6847 or 703-487-4650). Available to registered users from the Defense Technical Information Center, Attn: Help Desk, 8725 Kingman Road, Suite 0944, Fort Belvoir, VA 22060-6218 (1-800-225-3842 or 703-767-9050).		12b. DISTRIBUTION CODE		
13. ABSTRACT (Maximum 200 words) This report examines the differences and similarities between U.S. Fish and Wildlife Service managers and biologist levels of job satisfaction.				
14. SUBJECT TERMS (Keywords) job satisfaction, U.S. Fish and Wildlife Service		15. NUMBER OF PAGES 8		16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL	

**Fort Collins Science Center**

*Production Staff*

**Team Lead, Information Management Services**  
**Desktop Publishing Specialist**

Jennifer Shoemaker  
Dora E. Medellin

**NOTE:** Mention of trade names or commercial products does not constitute endorsement or recommendation for use by the U.S. Government.